

### Abstract of the Disclosure

A fuel cell system has a fuel cell unit (1) and a fuel preparation unit. A measuring unit (7, 8) is provided for measuring at least a first operating parameter of the fuel cell unit (1). The fuel cell system makes possible an almost complete monitoring of the internal operating state of the fuel cell unit (1). The number of utilized sensors (7, 8) is reduced and thereby also the complexity of the system. This is achieved in that an evaluation unit (7, 8, 9) is provided for evaluating a time-dependent change of the first operating parameter of the fuel cell unit (1) in dependence upon a known time-dependent change of at least a second operating parameter of the fuel cell system.